FOREWIND

DOGGER BANK
TEESSIDE A & B

March
2014

Environmental Statement
Chapter 31
Inter-relationships

Application Reference: 6.31

Cover photograph: Installation of turbine foundations in the North Sea

Document Title	Dogger Bank Teesside A & B Environmental Statement – Chapter 31 Inter-relationships
Forewind Document Reference	F-OFC-CH-031 Issue 4.1
Date	March 2014

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Date / initials check			12 March 2014
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Date / initials approval			12 March 2014
Forewind Approval			
Date / Reference approval		Gareth Lewis	10 March 2014

Title:		Contract No. (if applicable)
Dogger Bank Teesside A & B Environmental Statement Chapter 31 Inter-relationships		Onshore ☒ Offshore ☒
Document Number: F-OFL-CH-031	Issue No: 4.1	Issue Date: 12 March 2014
Status: Issued for 1st Technical Review ☐ Issued for PEI3 ☐ Issued for 2nd Quality Review ☐ Issued for DCO ☒		
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Revision History

Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
September 2013	1	Issued for 1st Technical Review	RH	AL	AMP
02 October 2013	2	Issued for 2nd Technical Review	RH	AL	AL
09 October 2013	2.1	Issued for Approval	RZ	AH	AL
10 October 2013	3	Issued for PEI 3	RZ	RZ/RH	AL
04 March 2014	4	Pre-DCO Submission Review	RZ/RH	BLO	AL
12 March 2014	4.1	DCO submission	RZ/RH	BLO	AL

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1 Introduction

1.1 Background

1.1.1 This chapter of the Environmental Statement (ES) summarises the inter-relationships that have been identified as part of the Environmental Impact Assessment (EIA) for Dogger Bank Teesside A & B. The objective is to identify where the accumulation of residual impacts on a single receptor, and the relationship between those impacts, gives rise to additional impacts or impacts of greater significance, and thus, if needed, additional mitigation.

1.1.2 Inter-relationships are identified and assessed (where necessary) in the topic specific chapters of the ES (**Chapter 9** – **Chapter 30**), therefore this chapter is intended to act as a summary of those inter-relationships and a guide as to where the inter-relationships are discussed.

2 Guidance and Consultation

2.1 Legislation, policy and guidance

2.1.1 The assessment of potential inter-related impacts has been made with specific reference to the relevant National Policy Statements (NPS). These are the principle decision making documents for Nationally Significant Infrastructure Projects (NSIP).

2.1.2 Inter-relationships are referred to in the overarching NPS for Energy (EN-1) (Department of Energy and Climate Change (DECC) 2011a). Paragraph 4.2.6 of EN-1 states:

"The Infrastructure Planning Commission (IPC) (now the Planning Inspectorate) should consider how the accumulation of, and inter-relationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place."

2.1.3 The principal guidance documents used to inform the assessment of potential inter-related impacts are:

- Advice Note 9 Using the 'Rochdale Envelope[1]' (the Planning Inspectorate 2012b); and
- European Economic Commission (EEC) Council Directive 85/337/EEC (EEC 1985).

2.1.4 The former states that:

"The ES should not be a series of separate unrelated topic reports. The inter-relationship between aspects of the proposed development should be assessed and careful consideration should be given by the developer to explain how inter-relationships have been assessed in order to address the environmental impacts of the proposal as a whole. It need not necessarily follow that the maximum adverse impact in terms of any one topic impact would automatically result in the maximum potential impact when a number of topic impacts are considered collectively. In addition, individual impacts may not be significant but could become significant when their inter-relationship is assessed. It will be for the developer to demonstrate that the likely significant impacts of the project have been properly assessed."

[1] As described in **Chapter 5 Project Description** the term 'Rochdale Envelope' refers to case law (R.V. Rochdale MBC Ex Part C Tew 1999 "the Rochdale case"). The 'Rochdale Envelope' for a project outlines the realistic worst case scenario or option for each individual impact, so that it can be safely assumed that all lesser options will have less impact.

2.1.5 In Annex III of the latter it is stated that within a ES there should be:

"A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter- relationship between the above factors."

2.2 Consultation

2.2.1 To inform the ES, Forewind has undertaken a thorough pre-application consultation process, which has included the following key stages:

- Scoping Report submitted to the Infrastructure Planning Commission (IPC) (now the Planning Inspectorate) (May 2012);
- Scoping Opinion received from the Planning Inspectorate (June 2012);
- First stage of statutory consultation (in accordance with sections 42 and 47 of the Planning Act 2008) on Preliminary Environmental Information (PEI) 1 (report published May 2012); and
- Second stage of statutory consultation (in accordance with sections 42, 47 and 48 of the Planning Act 2008) on the draft ES designed to allow for comments before final application to the Planning Inspectorate.

2.2.2 In between the statutory consultation periods, Forewind consulted specific groups of stakeholders on a non-statutory basis to ensure that they had an opportunity to inform and influence the development proposals. Consultation undertaken throughout the pre-application development phase has informed Forewind's design decision making and the information presented in this document. Further information detailing the consultation process is presented in **Chapter 7 Consultation**. A Consultation Report is also provided alongside this ES, as part of the overall planning submission.

2.2.3 A summary of the consultation carried out at key stages throughout the project, of particular relevance to inter-relationships, is presented in **Table 2.1**. This table only includes the key items of consultation that have defined the assessment. Where possible comments, issues and concerns raised during consultation have been addressed in meetings with consultees and hence have not resulted in changes to the content of the ES. In these cases, the issue in question has not been captured in **Table 2.1**. A full explanation of how the consultation process has shaped the ES, as well as tables of all responses received during the statutory consultation periods, will be provided in the Consultation Report.

Table 2.1 Summary of consultation and issues raised by consultees

Date and form of consultation	Consultee	Summary	ES Chapter Reference
No responses were received as part of the consultation on the draft ES chapter for Inter-relationships (section 42 consultation on the draft ES, statutory).			
June 2012 (Scoping Opinion, statutory)	Planning Inspectorate	Inter-relationships between factors must be assessed in order to address the environmental impacts of the proposal as a whole. This will help to ensure that the ES is not a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the proposed development. This is particularly important when considering impacts in terms of any permutations or parameters to the proposed development.	Section 7 of **Chapter 4 EIA Process**, and Section 3 of this chapter.
June 2012 (Scoping Opinion, statutory)	Planning Inspectorate	The ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts.	Section 5 of this chapter.
June 2012 (Scoping Opinion, statutory)	Planning Inspectorate	The Secretary of State recognises that the way in which each element of the environment may be affected by the proposed development can be approached in a number of ways. However it considers that it would be helpful, in terms of ease of understanding and in terms of clarity of presentation, to consider the impact assessment in a similar manner for each of the specialist topic areas. The Secretary of State recommends that a common format should be applied where possible.	Section 3 of this chapter.

3 Methodology

3.1 Methodology

3.1.1 Inter-relationships have been described taking into account all of the impacts that have been identified upon specific receptors. Both beneficial and adverse impacts have been considered in this process. Where appropriate to do so, a combined impact from all of the sources affecting a receptor has been identified.

3.1.2 When considering the potential for inter-relationships to occur, it is assumed that an effect determined as having no impact on a receptor will not result in an inter-relationship when combined with other effects on the same receptor. However, where a series of negligible or greater residual impacts are identified, they are taken forward for further consideration.

3.1.3 To identify all instances where inter-relationships might occur, a screening process was undertaken on a topic by topic basis (**Chapter 9** – **Chapter 30**) (Section 4). The screening process ensures that all potential inter-relationships have been identified across the ES as a whole.

3.1.4 **Chapter 8 Designated Sites** is based on the conclusions of other chapters in the ES (namely marine and coastal ornithology, marine mammals, marine and intertidal ecology and terrestrial ecology). Inter-relationships that are relevant to designated sites are therefore included under the discussion of those chapters.

3.1.5 Section 5 summarises the inter-relationships that have been identified on each receptor and receptor group. Figures for each topic have been provided to give an overview of all of the inter-relationships that have been identified.

Influencing parameters and linked chapters

3.1.6 In the process of identifying residual impacts that could accumulate on any given receptor, it is also useful to consider how each parameter, or topic, could affect other receptors. As such, this chapter identifies two distinct relationships:

- Influencing parameters, which are those parameters that could contribute to the overall level of impact on a receptor, represent the inter-relationships for the purpose of this assessment. For example, effects assessed as part of the marine physical processes study have the potential to contribute to the overall level of impact assessed on marine water and sediment quality receptors; and
- Linked chapters, where it is recognised that the effects assessed in each chapter have the potential to impact any number of other receptors. For example, any impacts identified on marine water and sediment quality have the potential to cause an impact on receptors assessed in linked chapters such as marine and intertidal ecology and fish and shellfish ecology.

3.1.7 **Table 4.1** identifies the influencing parameters with an 'I' (as these are the inter-relationships presented in the left hand boxes of **Figure 3.1**) and the linked chapters with an 'L' (presented in the right hand boxes in **Figure 3.1**).

3.1.8 **Figure 5.1** – **Figure 5.22** provide an overview of all of the relationships that have been identified. The receptor for which the potential for an accumulation of impacts is being assessed is placed in the middle of the diagram. Influencing parameters are identified on the left hand side and the other receptors that could be impacted (i.e. the linked chapters) on the right hand side (as an example, **Figure 3.1** identifies the inter-relationships and linked chapters that are relevant to marine water and sediment quality).

3.1.9 The combined impact of all the influencing parameters on a receptor is then assessed. Using expert judgement and the impact assessments in the relevant chapters the inter-related impact is then presented and any additional mitigation measures are identified where necessary.

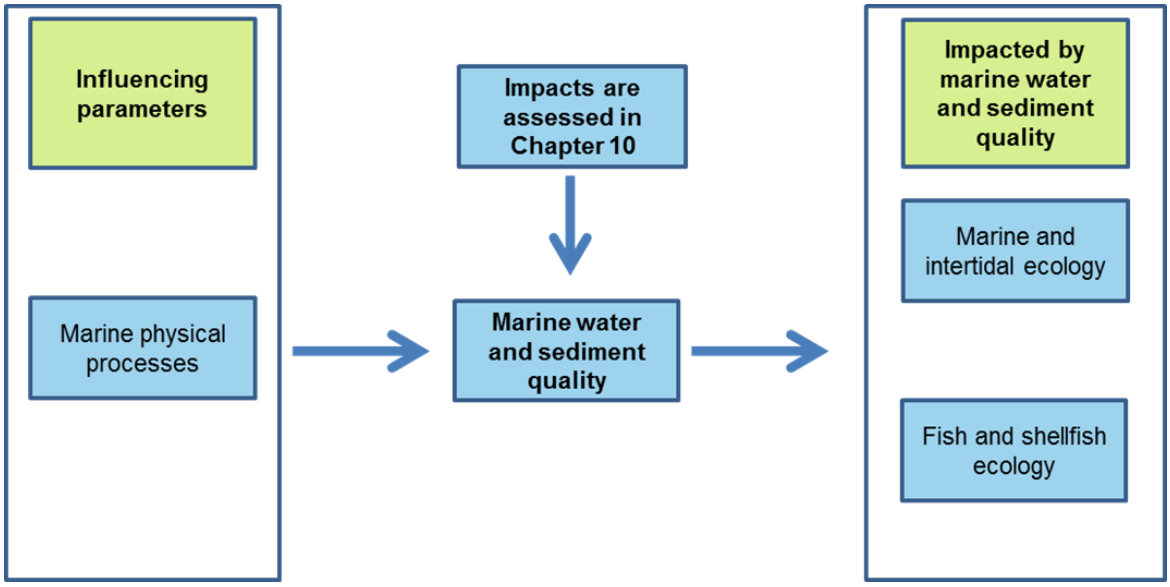

Figure 3.1 Identification of inter-relationships for marine water and sediment quality

4 Screening

4.1 Screening

4.1.1 **Table 4.1** identifies where, during the screening process, inter-relationships and linked chapters have been identified. As described above, the potential for an inter-relationship is indicated by the letter 'I', where an influencing parameter may contribute to the overall level of impact on a receptor. Chapters that are linked (see paragraph 3.1.6) are identified by the letter 'L'.

4.1.2 Where the potential for an inter-relationship is identified, a summary of the assessment is provided in Section 5. For ease of understanding, a figure is provided for each receptor group, identifying both the inter-relationships and the linked chapters.

Table 4.1 Inter-relationships screening

Receptor	Feature impacting upon the receptor																				
	Marine physical processes	Marine water and sediment quality	Marine and coastal ornithology	Marine and Intertidal ecology	Fish and shellfish ecology	Marine mammals	Commercial fisheries	Shipping and navigation	Other marine users	Marine and coastal archaeology	Military activities and civil aviation	Seascape and visual character	Landscape and visual	Socio- economics	Tourism & recreation	Onshore geology, water resources and land quality	Terrestrial ecology	Land use and agriculture	Terrestrial archaeology	Traffic and access	Noise and vibration	Air quality
Marine physical processes		L	L	L	L				L	L		L			L							
Marine water and sediment quality	I			L	L		L															
Marine and coastal ornithology	I			IL	IL	IL		I			I										I	
Marine and intertidal ecology	I	I	IL		L		I															
Fish and shellfish ecology	I	I	IL	I		IL	IL															
Marine mammals			IL		IL		I	I	I													
Commercial fisheries		I		L	IL	L		IL				L		L								
Shipping and navigation			L			L	IL		IL		IL	L			L							
Other marine users	I					L		IL			I											
Marine and coastal archaeology	I																					
Military activities and civil aviation			L					IL	L													
Seascape and visual	I						I	I							L							

Receptor	Feature impacting upon the receptor																				
	Marine physical processes	Marine water and sediment quality	Marine and coastal ornithology	Marine and Intertidal ecology	Fish and shellfish ecology	Marine mammals	Commercial fisheries	Shipping and navigation	Other marine users	Marine and coastal archaeology	Military activities and civil aviation	Seascape and visual character	Landscape and visual	Socio- economics	Tourism & recreation	Onshore geology, water resources and land quality	Terrestrial ecology	Land use and agriculture	Terrestrial archaeology	Traffic and access	Noise and vibration	Air quality
character																						
Landscape and visual														L	L	I	I	I	L	I	I	I
Socio-economics							I								I			I				
Tourism and recreation	I							I				I	I	L						I	I	I
Onshore geology, water resource and land quality																	L	L				
Terrestrial ecology													IL			I					I	I
Land use and agriculture														L		I	I			I		
Terrestrial archaeology													I									
Traffic and access													L		L			L	L		L	L
Noise and vibration			L												L		L			I		
Air quality																	L			I		

5 Assessment of Impacts

5.1 Inter-relationships that effect marine physical processes

5.1.1 The marine physical processes assessment focuses on describing the changes or effects against the existing environment, rather than defining the impact.

5.1.2 The parameters that influence marine physical processes as well as the receptors that are impacted by them are identified in **Figure 5.1**.

5.1.3 No influencing parameters on marine physical processes have been identified.

5.1.4 Marine physical processes do however have the potential to affect other receptors. These are:

- Marine water and sediment quality;
- Marine and coastal ornithology;
- Marine and intertidal ecology;
- Fish and shellfish ecology;
- Marine and coastal archaeology;
- Other marine users;
- Tourism and recreation; and
- Seascape and visual character.

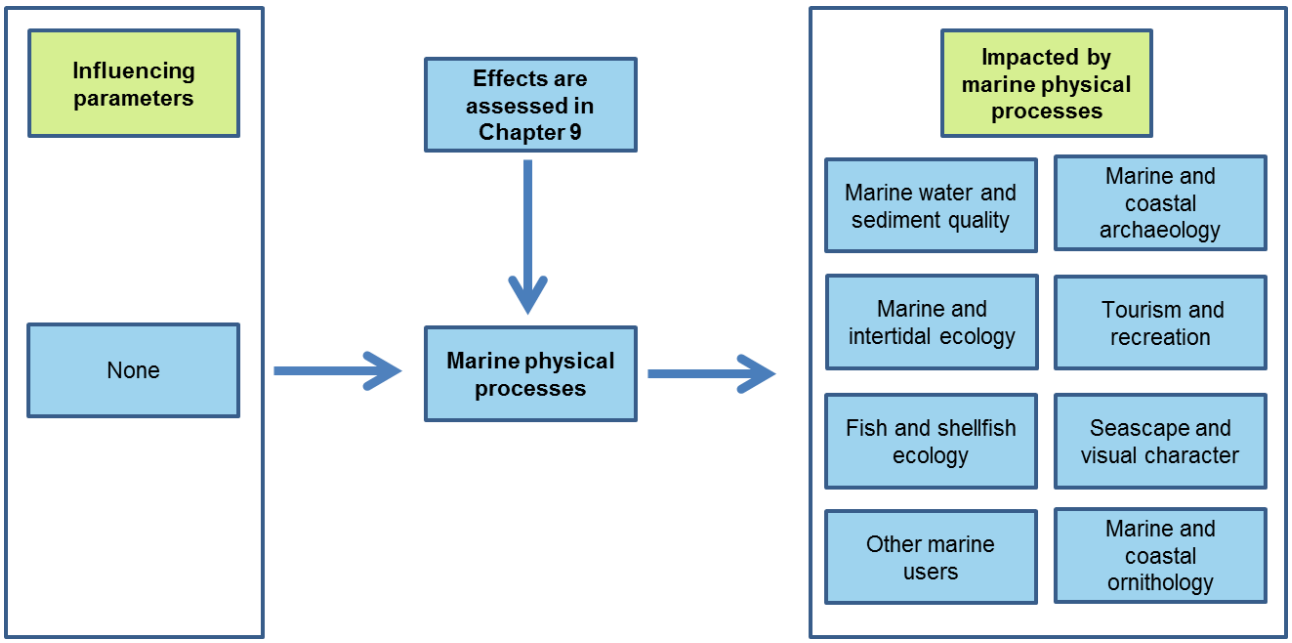

Figure 5.1 Identification of inter-relationships for marine physical processes.

Summary

5.1.5 Although the effects assessed on marine physical processes have the potential to impact a number of other receptors, no inter-relationships have been identified where an accumulation of residual effects on marine physical processes and the relationship between those effects give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.2 Inter-relationships that impact marine water and sediment quality

5.2.1 The parameters that influence marine water and sediment quality as well as the receptors that are impacted by it are identified in **Figure 5.2**.

5.2.2 Influencing parameters on marine water and sediment quality are:

- Marine physical processes.

5.2.3 Marine water and sediment quality also has the potential to affect other receptors. These are:

- Marine and intertidal ecology;
- Fish and shellfish ecology and
- Commercial fisheries.

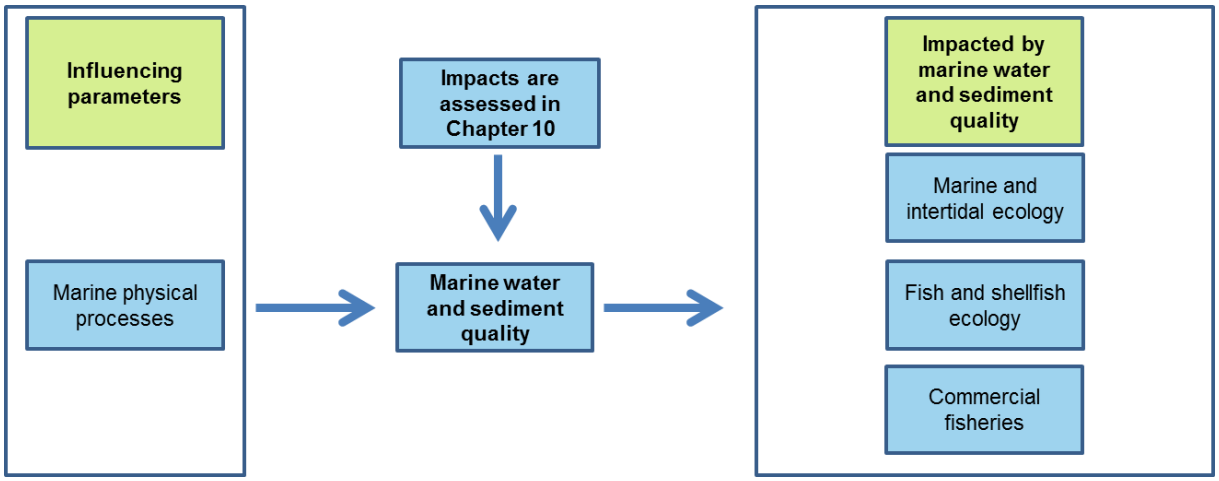

Figure 5.2 Identification of inter-relationships for marine water and sediment quality.

Marine physical processes

5.2.4 There is potential for an inter-related impact between marine physical processes and marine water and sediment quality during all phases of development. For example, changes to hydrodynamics have the potential to cause a deterioration in water quality due to increased turbidity or from the re-suspension of contaminants. However, these impacts have been assessed in **Chapter 10 Marine Water and Sediment Quality** as **minor adverse** and **negligible** respectively. The assessment has been based on the results of the

hydrodynamic modelling as presented in **Chapter 9 Marine Physical Processes**.

Summary

5.2.5 No inter-relationships have been identified where an accumulation of residual impacts on marine water and sediment quality and the relationships between those impacts give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.3 Inter-relationships that impact marine and coastal ornithology

5.3.1 The parameters that influence marine and coastal ornithology as well as the receptors that are impacted by it are identified in **Figure 5.3**.

5.3.2 Influencing parameters on marine and coastal ornithology are:

- Marine physical processes;
- Marine and intertidal ecology;
- Fish and shellfish ecology;
- Marine mammals;
- Shipping and navigation;
- Military activities and civil aviation; and
- Noise and vibration.

5.3.3 Marine and coastal ornithology also has the potential to affect other receptors. These are:

- Marine and intertidal ecology;
- Fish and shellfish ecology; and
- Marine mammals.

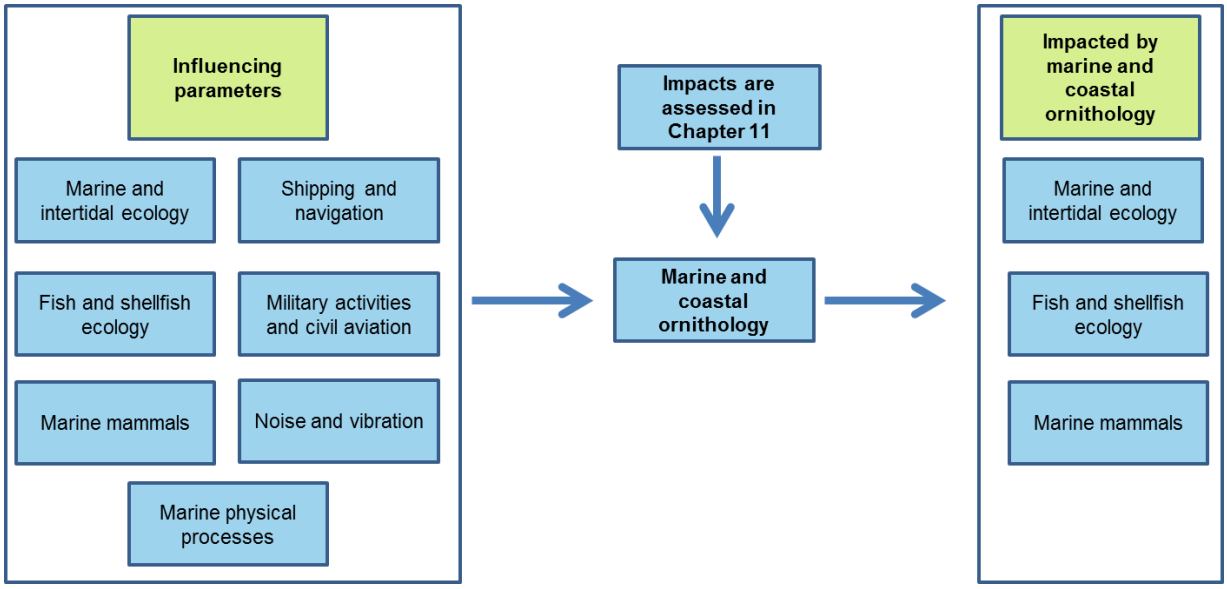

Figure 5.3 Identification of inter-relationships for marine and coastal ornithology.

Marine physical processes

5.3.4 There is potential for an inter-related impact between marine and coastal ornithology and marine physical processes during the construction phase of the development. This is due to a number of bird species relying on sight when they are foraging and this could be impacted by an increase in suspended sediment concentrations. Impacts upon ornithology are assessed in **Chapter 11 Marine and Coastal Ornithology** as **negligible** to **minor adverse**. These impacts are not likely to result in an accumulation of impacts on marine and coastal ornithology in addition to that already assessed.

Marine and intertidal ecology

5.3.5 There is potential for an inter-related impact between marine and coastal ornithology and marine and intertidal ecology during the construction phase of the development. This is due to intertidal and subtidal flora and fauna being part of the food resource of marine and coastal birds. Impacts upon intertidal ecology are assessed in **Chapter 12** as **negligible** and **minor adverse** and are not likely to result in an accumulation of impacts on marine and coastal ornithology in addition to that already assessed.

Fish and shellfish ecology (intertidal invertebrates)

5.3.6 There is potential for an inter-related impact between marine and coastal ornithology and fish and shellfish ecology during all phases of the development. This is related to them both relying on the same food resource (intertidal invertebrates). Impacts on fish and shellfish are assessed in **Chapter 13 Fish and Shellfish Ecology** as **negligible** or **minor adverse** (depending on the species) and are not likely to result in an accumulation of impacts on marine and coastal ornithology in addition to that already assessed.

Marine mammals and fish and shellfish ecology (prey species of fish)

5.3.7 There is potential for an inter-related impact between marine and coastal ornithology, fish and shellfish ecology and marine mammals during all phases of the development. This is related to them all relying on the same food resource (prey species of fish). Impacts on fish and shellfish (including prey species) are assessed in **Chapter 13** as **negligible** or **minor adverse** (depending on the species) and are not likely to result in an accumulation of impacts on marine and coastal ornithology in addition to that already assessed.

Shipping and navigation, military activities and civil aviation

5.3.8 There is potential for an inter-related impact between marine and coastal ornithology and shipping and navigation, military activities and civil aviation during all phases of the development. This is due to an increase in human presence and the presence of structures (mobile or static) including lighting. This impact has been assessed in **Chapter 11** as **moderate adverse** for one bird species at one site with all other impacts being **negligible** or **minor adverse**.

5.3.9 There is also potential for a beneficial inter-related impact during the operational phase of the development due to the lighting around the offshore structures assisting in nocturnal prey location (**Appendix 11A**). Whilst there are indications that lighting may result in a positive effect in relation to night time foraging, empirical evidence is not sufficiently advanced to quantify the benefit.

Noise and vibration

5.3.10 There is potential for an inter-related impact between marine and coastal ornithology and an increase in noise during all phases of the development. This impact has been assessed in **Chapter 11** as **no impact** to **minor adverse** depending on the species. It should be taken in to account that this assessment was undertaken as part of the displacement impact which cumulatively considers noise, vibration, visual disturbance and disturbance through human presence.

Summary

5.3.11 No inter-relationships have been identified where an accumulation of residual impacts on the food resources considered for marine and coastal ornithology give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.3.12 The assessment recognises that aviation and navigation lighting should be minimised to avoid attracting birds. However, taking into account safety considerations, the minimum required levels will represent compliance with the requirements of the relevant aviation and navigation stakeholders. Therefore no further mitigation measures are identified.

5.4 Inter-relationships that impact marine and intertidal ecology

5.4.1 The parameters that influence marine and intertidal ecology as well as the receptors that are impacted by it are identified in **Figure 5.4**.

5.4.2 Influencing parameters on marine and intertidal ecology are:

- Marine physical processes;
- Marine water and sediment quality; and
- Commercial fisheries.

5.4.3 Marine and intertidal ecology also has the potential to affect other receptors. These are:

- Marine and coastal ornithology; and
- Fish and shellfish ecology.

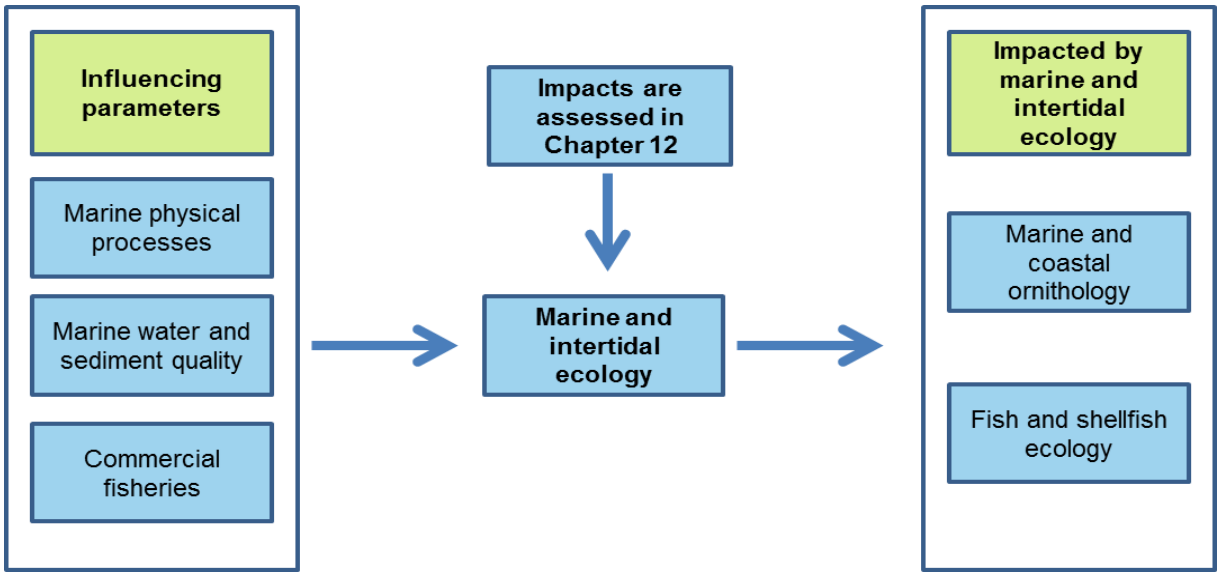

Figure 5.4 Identification of inter-relationships for marine and intertidal ecology

Marine physical processes

5.4.4 There is potential for inter-related impacts between marine and intertidal ecology and marine physical processes due to a change in hydrodynamics and an increase in suspended sediment concentration during all phases of the development. **Chapter 12** assesses these impacts as **negligible**. The assessment has been based on the results of the hydrodynamic modelling as presented in **Chapter 9**.

Marine water and sediment quality

5.4.5 There is potential for two inter-related impacts between marine and intertidal ecology and marine water and sediment quality:

- Impacts due to the release of pollutants from sediment and accidental spillages during all phases of the Dogger Bank Teesside A & B development. **Chapter 12** assesses these impacts upon marine and intertidal ecology as **negligible** or **minor adverse** depending on the VER which has been assessed; and
- Impacts due to an increase in suspended sediment concentrations (SSC) during all phases of the development. These impacts have also been

assessed in **Chapter 12** where the impact is assessed to be **negligible** or **minor adverse** depending on the VER which has been assessed. This assessment is based on the assessment conducted in **Chapter 9** and **Chapter 10**.

Commercial fisheries

5.4.6 There is potential for a beneficial inter-related impact on marine and intertidal ecology during all phases of the development. This relates to a potential reduction in commercial fishing activity (specifically mobile gear types that interact with the seabed such as dredging and beam trawling) in the development area. If this were the case (not confirmed), this could lead to a decrease in the amount of seabed that is disturbed by fishing gear (**Chapter 12**).

Summary

5.4.7 No inter-relationships have been identified where an accumulation of residual impacts on marine and intertidal ecology give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.5 Inter-relationships that impact fish and shellfish ecology

5.5.1 The parameters that influence fish and shellfish ecology as well as the receptors that are impacted by it are identified in **Figure 5.5**.

5.5.2 Influencing parameters on fish and shellfish ecology are:

- Marine physical processes;
- Marine water and sediment quality;
- Marine and coastal ornithology;
- Marine and intertidal ecology;
- Marine mammals; and
- Commercial fisheries.

5.5.3 Fish and shellfish ecology also has the potential to affect other receptors. These are:

- Marine and coastal ornithology;
- Marine mammals; and
- Commercial fisheries.

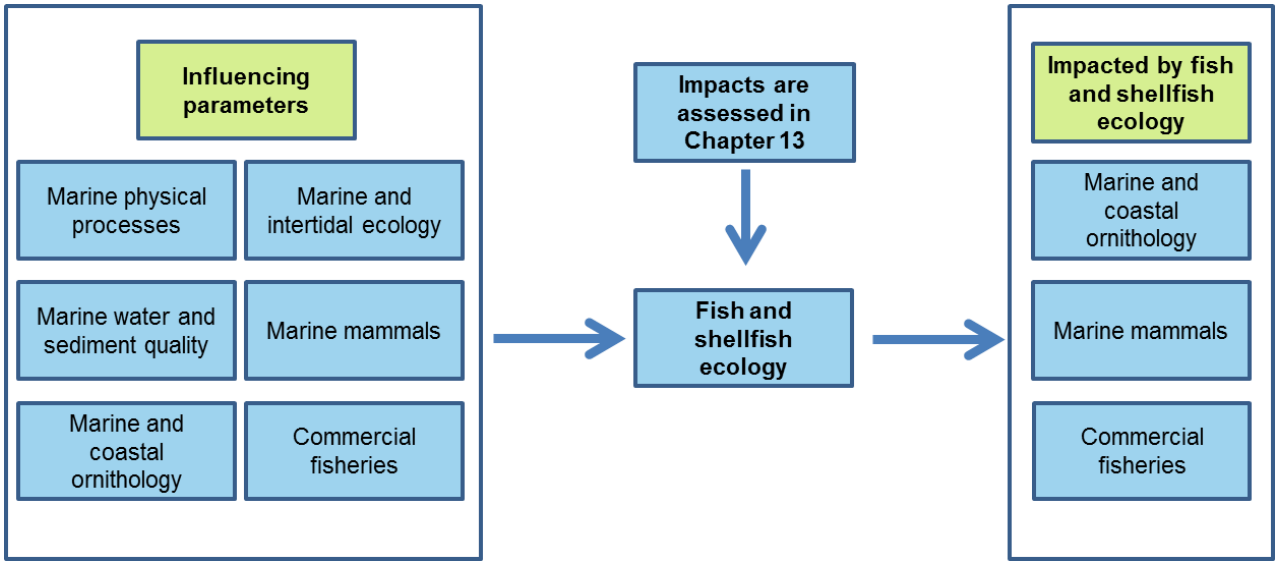

Figure 5.5 Identification of inter-relationships for fish and shellfish ecology

Marine physical processes

5.5.4 There is potential for inter-related impacts between fish and shellfish ecology and marine physical processes due to a change in hydrodynamics (namely where physical processes result in an increase in suspended sediment concentrations and deposition) during all phases of the development. **Chapter 13** assesses these impacts upon fish and shellfish ecology as **minor adverse**.

Marine water and sediment quality

5.5.5 There is potential for two inter-related impacts between fish and shellfish ecology and marine water and sediment quality:

- Impacts due to the release of pollutants from sediment and accidental spillages during all phases of the Dogger Bank Teesside A & B development; and
- Impacts due to an increase in suspended sediment concentrations during the construction phase of the development.

5.5.6 These impacts have been assessed in **Chapter 13** as **minor adverse**. This assessment is based on the assessment conducted in **Chapter 9** and **Chapter 10**.

Marine and coastal ornithology, marine and intertidal ecology and marine mammals

5.5.7 There is potential for an inter-related impact during all phases of the development between fish and shellfish ecology, marine and coastal ornithology, marine and intertidal ecology, and marine mammals as all of these receptor groups are linked through the food chain. However, **no impacts** have been identified that would be likely to result in an accumulation of impacts on fish and shellfish ecology in addition to those already assessed.

Commercial fisheries

5.5.8 There is potential for adverse or beneficial inter-related impacts between fish and shellfish ecology and commercial fisheries during all phases of the development. This is due to changes in fishing activity (assessed in **Chapter 15 Commercial Fisheries** under temporary/complete loss or restricted access to fishing grounds).

5.5.9 The influence on fish and shellfish from the displacement of commercial fishing pressure might be beneficial in areas that are no longer accessible and adverse in areas that might see an increase in the fishing pressure. This is assessed in **Chapter 13** and **Chapter 15**.

Summary

5.5.10 No inter-relationships have been identified where an accumulation of residual impacts on fish and shellfish ecology give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.6 Inter-relationships that impact marine mammals

5.6.1 The parameters that influence marine mammals as well as the receptors that are impacted by it are identified in **Figure 5.6**.

5.6.2 Influencing parameters on marine mammals are:

- Marine and coastal ornithology;
- Fish and shellfish ecology;
- Commercial fisheries;
- Shipping and navigation; and
- Other marine users.

5.6.3 Marine mammals also have the potential to affect other receptors. These are:

- Marine and coastal ornithology; and
- Fish and shellfish ecology.

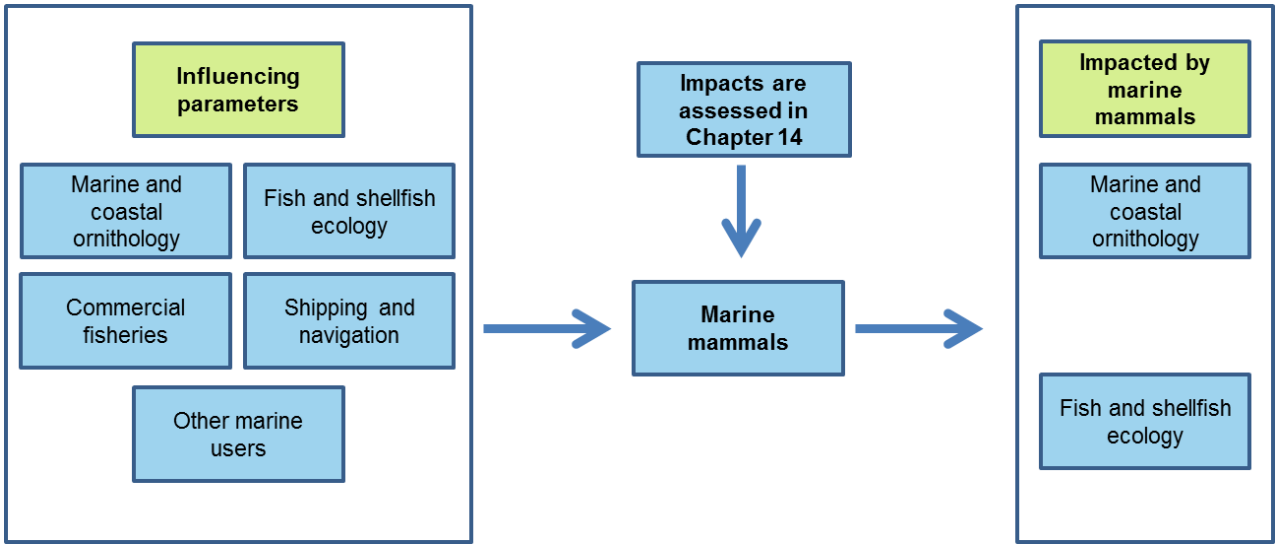

Figure 5.6 Identification of inter-relationships for marine mammals

Marine and coastal ornithology and fish and shellfish ecology

5.6.4 There is potential for an inter-related impact between marine mammals, marine and coastal ornithology and fish and shellfish ecology during all phases of the development. This is due to a shared prey resource (prey species of fish and shellfish). Impacts upon fish and shellfish species are assessed in **Chapter 13** as **negligible** or **minor adverse** (depending on the species) for all stages of the development. Impacts on marine mammals from changes to the prey resource are assessed in **Chapter 14 Marine Mammals** as **minor adverse** and are not likely to result in an accumulation of impacts on marine mammals in addition to that already assessed.

Shipping and navigation and other marine users

5.6.5 There is potential for an inter-related impact between marine mammals and shipping and navigation and other marine users during all phases of the development. This is related to an increased collision risk through hull impacts and ducted propellers. These impacts have been assessed in **Chapter 14** where the impact is assessed as **negligible** to **minor adverse** impact.

Commercial fisheries

5.6.6 There is potential for inter-related impacts between marine mammals and commercial fisheries during all phases of the development. These are related to:

- Competition for marine mammal prey species/commercially important fish species;
- By-catch of prey species for marine mammals; and
- Collision risk.

5.6.7 These impacts are considered to already occur and part of the existing baseline in **Chapter 14** therefore **no impacts** have been assessed for these inter-relationships.

Summary

5.6.8 No inter-relationships have been identified where an accumulation of residual impacts on marine mammals give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.7 Inter-relationships that impact commercial fisheries

5.7.1 The parameters that influence commercial fisheries as well as the receptors that are impacted by it are identified in **Figure 5.7**.

5.7.2 Influencing parameters on commercial fisheries are:

- Marine water and sediment quality;
- Fish and shellfish ecology; and
- Shipping and navigation.

5.7.3 Commercial fisheries also have the potential to affect other receptors. These are:

- Marine and intertidal ecology;
- Fish and shellfish ecology;
- Marine mammals;
- Shipping and navigation; and
- Socio-economics.

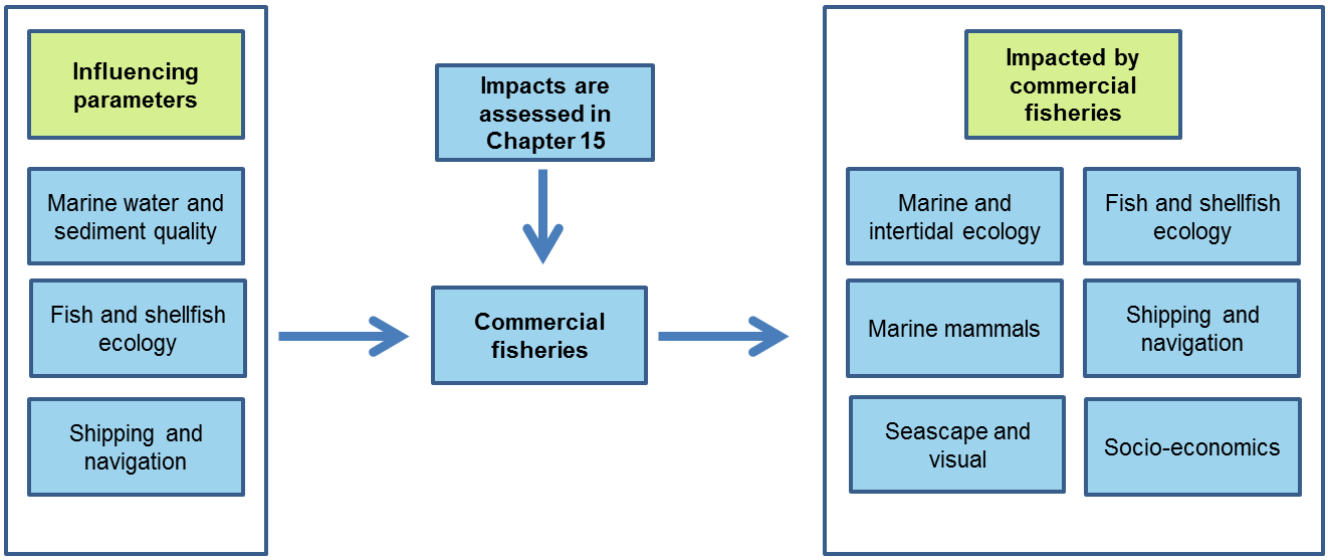

Figure 5.7 Identification of inter-relationships for commercial fisheries

Marine water and sediment quality

5.7.4 There is potential for inter-related impacts between commercial fisheries and marine water and sediment quality. These are related to restricted access to areas if there is an accident or spill. **Chapter 15** assessed these impacts as **no discernible impact** to **minor adverse**.

Fish and shellfish ecology

5.7.5 There is potential for inter-related impacts between commercial fisheries and fish and shellfish ecology. These are related to a reduction of commercially important fish and shellfish species. **Chapter 13** assesses these impacts as **minor adverse**.

5.7.6 There is also potential for a beneficial inter-related impact during the operational phase of the development due to colonisation of structures by commercial shellfish species (**Chapter 13**).

Shipping and navigation

5.7.7 There is potential for inter-related impacts between commercial fisheries and shipping and navigation during all phases of development. These are related to an increase in steaming time to fishing grounds and safety issues for fishing vessels. **Chapter 16 Shipping and Navigation** assesses these impacts as **negligible** and **minor adverse** respectively.

Summary

5.7.8 No inter-relationships have been identified where an accumulation of residual impacts on commercial fisheries give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.8 Inter-relationships that impact shipping and navigation

5.8.1 The parameters that influence shipping and navigation as well as the receptors that are impacted by it are identified in **Figure 5.8**.

5.8.2 Influencing parameters on shipping and navigation are:

- Commercial fisheries;
- Other marine users; and
- Military activities and civil aviation.

5.8.3 Shipping and navigation also have the potential to affect other receptors. These are:

- Marine and coastal ornithology;
- Marine mammals;
- Commercial fisheries;
- Seascape and visual character;
- Other marine users;
- Military activities and civil aviation; and
- Tourism and recreation.

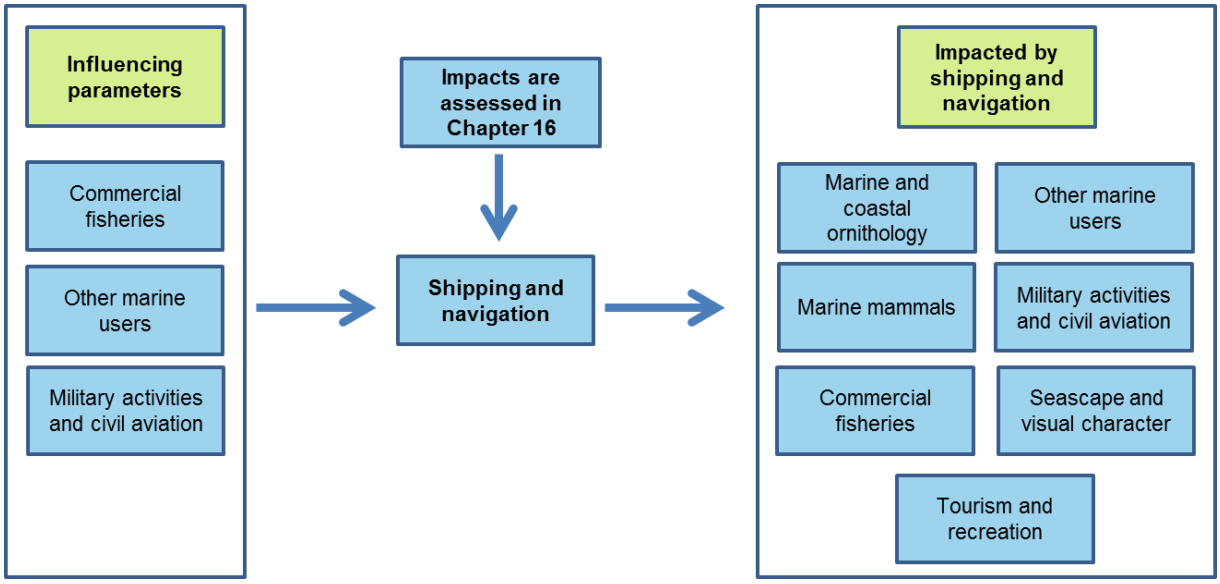

Figure 5.8 Identification of inter-relationships for shipping and navigation.

Commercial fisheries

5.8.4 There is potential for inter-related impacts between shipping and navigation and commercial fisheries during all phases of the development. These are related to displacement of commercial fishing vessels. This is however considered as part of the assessment in **Chapter 16** and is therefore not further addressed in this chapter.

Other marine users

5.8.5 There is potential for inter-related impacts between shipping and navigation and other marine users during all phases of the development. These are related to increased restrictions on navigational routes due to exclusion zones from other developments. **Chapter 16** assesses these impacts as **minor adverse**.

Military activities and civil aviation

5.8.6 There is potential for inter-related impacts between shipping and navigation and military activities and civil aviation during the operational phase of the development. This is related to lighting of offshore structures for military and civil aviation purposes conflicting with the lighting requirements from a maritime perspective. These requirements are the subject of ongoing consultation with the relevant consultees.

Summary

5.8.7 No inter-relationships have been identified where an accumulation of residual impacts on shipping and navigation give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.9 Inter-relationships that impact other marine users

5.9.1 The parameters that influence other marine users as well as the receptors that are impacted by it are identified in **Figure 5.9**.

5.9.2 Influencing parameters on other marine users are:

- Marine physical processes;
- Shipping and navigation; and
- Military activities and civil aviation.

5.9.3 Other marine users also have the potential to affect other receptors. These are:

- Marine mammals; and
- Shipping and navigation.

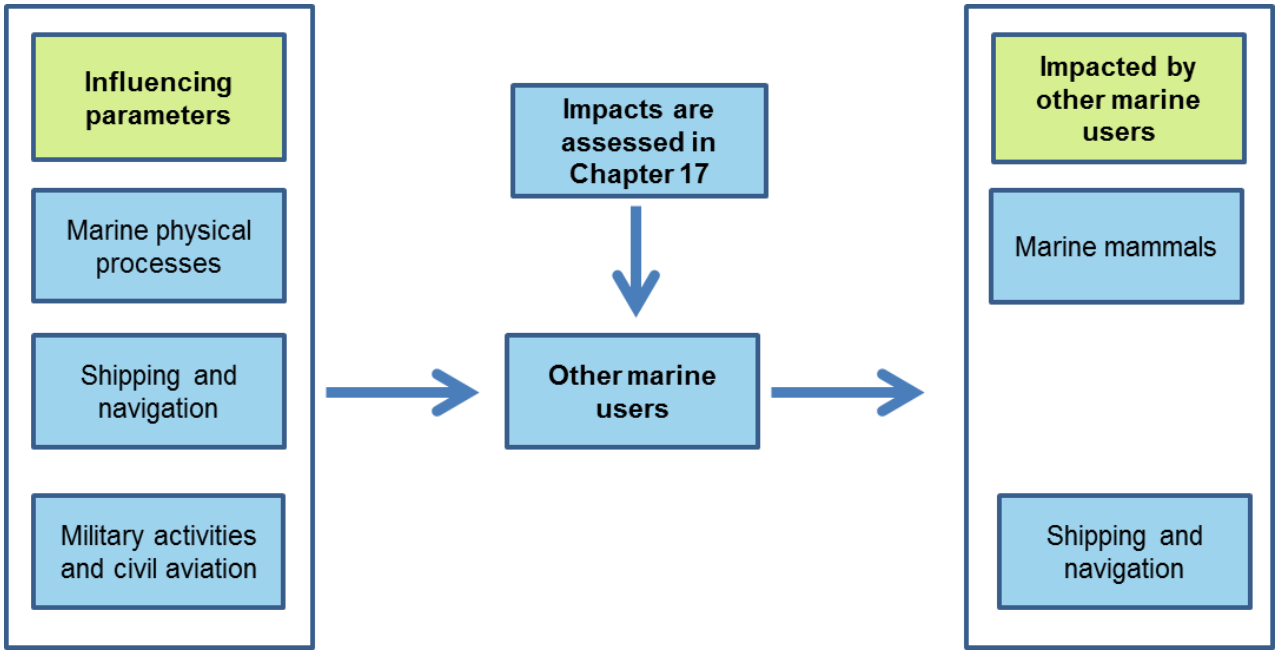

Figure 5.9 Identification of inter-relationships for other marine users.

Marine physical processes

5.9.4 There is potential for an inter-related impact on other marine users from marine physical processes during all phases of the development. This is due to sediment influencing aggregate dredging sites and suspended sediment and deposition affecting Potash mining activities. **Chapter 17 Other Marine Users** assesses these impacts as **negligible** and **minor adverse** for both aggregate dredging and Potash mining respectively.

Shipping and navigation

5.9.5 There is potential for an inter-related impact on other marine users from shipping and navigation during all phases of the development. This is due to safety zones around construction and decommissioning vessels and the physical presence of the wind farm displacing commercial shipping, fishing vessels and recreational vessels, leading to an increase in encounters and therefore vessel to vessel collision risk. **Chapter 16** assesses these impacts as **minor adverse**.

Military activities and civil aviation

5.9.6 There is potential for an inter-related impact on other marine users from military activities and civil aviation during all phases of the development. This is due to impacts on their aviation activities, mainly helicopters, relating to the physical presence of the wind farm. **Chapter 19 Military Activities and Civil Aviation** assesses that the presence of the wind farm will change the operating environment for search and rescue operations although through a range of mitigation measures any impacts will be reduced to the lowest level possible. **Chapter 19** assesses there to be no adverse impacts.

Summary

5.9.7 No inter-relationships have been identified where an accumulation of residual impacts on other marine users give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.10 Inter-relationships that impact marine and coastal archaeology

5.10.1 The parameters that influence marine and coastal archaeology as well as the receptors that are impacted by it are identified in **Figure 5.10**.

5.10.2 Influencing parameters on marine and coastal archaeology are:

- Marine physical processes.

5.10.3 No linked chapters have been identified for marine and coastal archaeology.

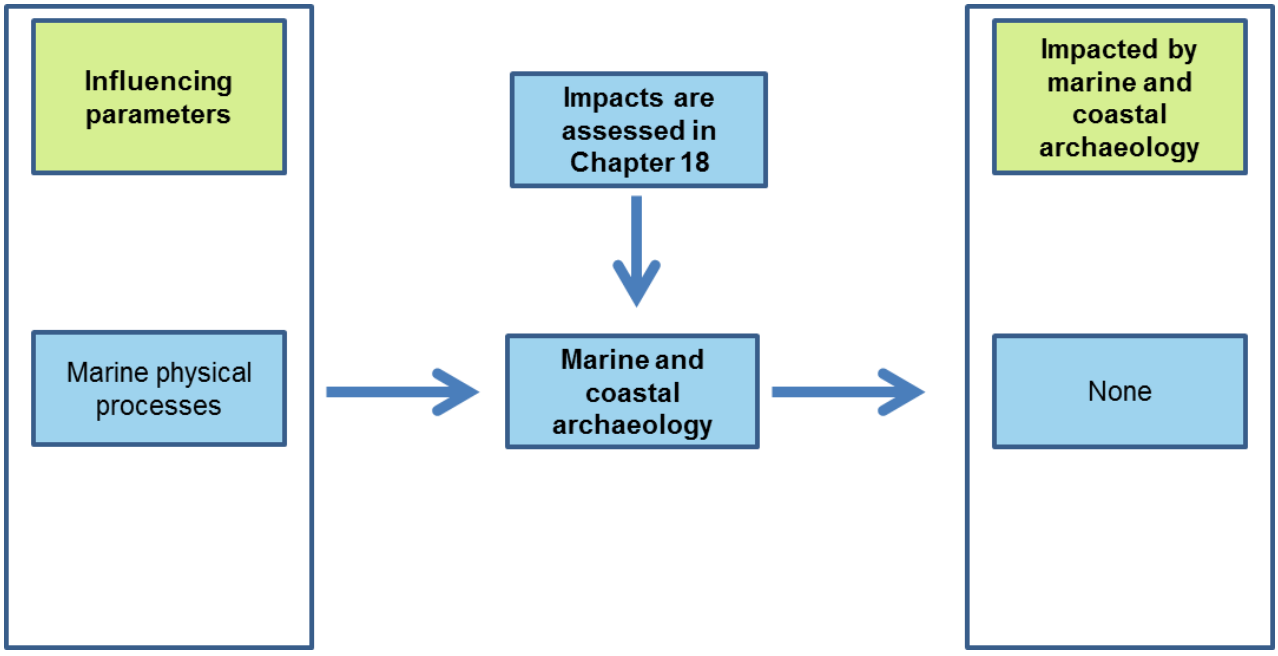

Figure 5.10 Identification of inter-relationships for marine and coastal archaeology.

Marine physical processes

5.10.4 There is potential for an inter-related impact between marine physical processes and marine and coastal archaeology during the construction and operational phases of the development. This is due to a change in hydrodynamics. **Chapter 18 Marine and Coastal Archaeology** assesses these impacts as **negligible**. The assessment has been based on the results of the hydrodynamic modelling as presented in **Chapter 9**.

Summary

5.10.5 No inter-relationships have been identified where an accumulation of residual impacts on marine and coastal archaeology give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.11 Inter-relationships that impact military activities and civil aviation

5.11.1 The parameters that influence military activities and civil aviation as well as the receptors that are impacted by it are identified in **Figure 5.11**.

5.11.2 Influencing parameters on military activities are:

- Shipping and navigation.

5.11.3 Military activities and civil aviation also have the potential to affect other receptors. These are:

- Marine and coastal ornithology;
- Shipping and navigation; and
- Other marine users.

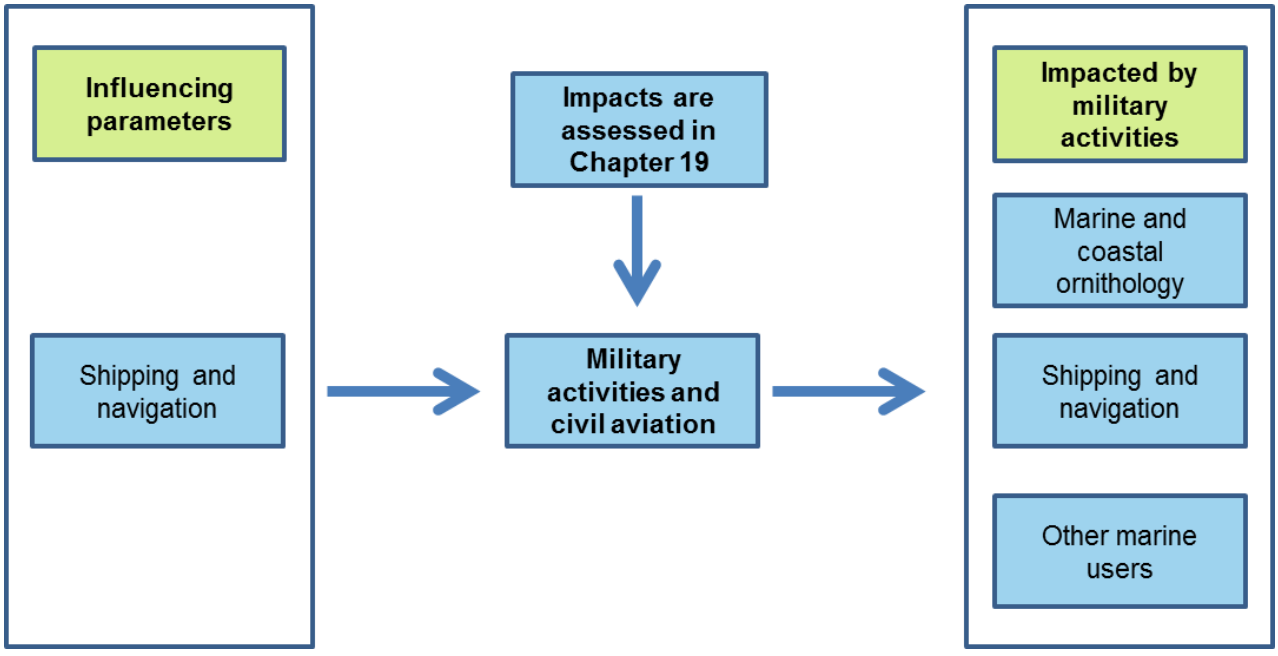

Figure 5.11 Identification of inter-relationships for military activities.

Shipping and navigation

5.11.4 There is potential for an inter-related impact between military activities and civil aviation and shipping and navigation during all phases of the development. This is due to a possible reduction in navigational routes in the vicinity of Ministry of Defence (MoD) training areas. Restrictions on training areas are assessed in **Chapter 19** as **negligible**.

5.11.5 There is also potential for inter-related impacts between military activities and civil aviation and shipping and navigation during the operational phase of the development. This is due to potentially conflicting lighting requirements. **Chapter 19** assesses these impacts as **negligible**. Lighting requirements are the subject of ongoing consultation with the relevant consultees.

Summary

5.11.6 No inter-relationships have been identified where an accumulation of residual impacts on military activities and civil aviation give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.12 Inter-relationships that impact seascape and visual character

5.12.1 The parameters that influence seascape and visual character as well as the receptors that are impacted by it are identified in **Figure 5.12**.

5.12.2 Influencing parameters on seascape and visual character are:

- Marine physical processes;
- Commercial fisheries; and
- Shipping and navigation.

5.12.3 Seascape and visual character also have the potential to affect other receptors. These are:

- Tourism and recreation.

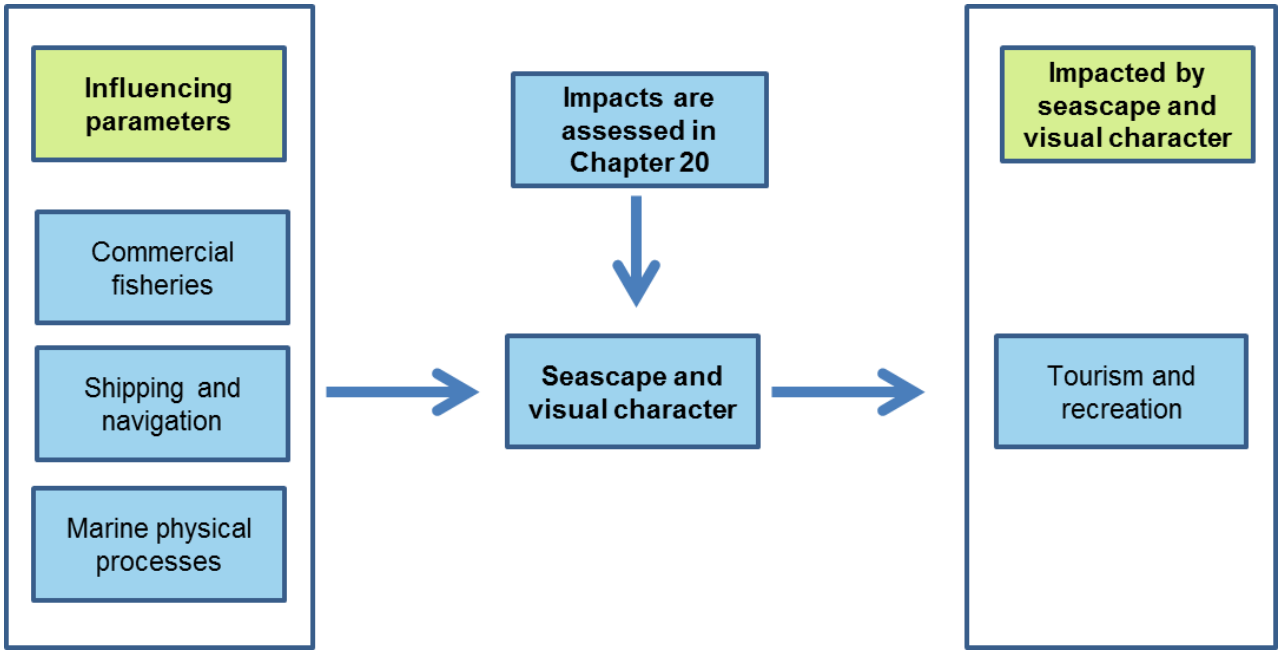

Figure 5.12 Identification of inter-relationships for seascape and visual character.

Marine physical processes

5.12.4 There is potential for an inter-related impact between marine physical processes and seascape during the construction phase of the development. Changes to coastal processes and the physical composition of the coast can affect the character of the seascape. This impact has been assessed in **Chapter 20 Seascape and Visual Character** as part of the overall consideration of construction impacts. The impact upon the seascape character during construction is assessed as **negligible** to **moderate adverse**.

Commercial fisheries

5.12.5 There is potential for an inter-related impact between commercial fisheries and seascape. Changes in commercial fisheries activity associated with the development of Dogger Bank Teesside A & B have the potential to change the seascape character of this area as commercial fishery vessels are part of the current seascape. These impacts have been assessed in **Chapter 20** as **negligible** to **moderate adverse**.

Shipping and navigation

5.12.6 There is potential for an inter-related impact between shipping and navigation and seascape. Increased shipping activity associated with the construction and operation of Dogger Bank Teesside A & B has the potential to reduce the visual amenity and seascape character of this area. These impacts have been assessed in **Chapter 20** as part of the overall consideration of construction and operation impacts.

Summary

5.12.7 The assessment undertaken for seascape and visual receptors has included a wide range of viewpoints and receptors. The potential for inter-relationships (during all phases of the development) is predominantly associated with the linkages between impacts on the seascape and visual amenity and other human receptors (captured as tourism and recreation). The assessment described in **Chapter 20** provides a fully comprehensive and representative assessment and is inherently inclusive of inter-relationships from the most sensitive of these receptor locations.

5.13 Inter-relationships that impact landscape and visual

5.13.1 The parameters that influence landscape and visual as well as the receptors that are impacted by it are identified in **Figure 5.13**.

5.13.2 Influencing parameters on landscape and visual are:

- Terrestrial ecology;
- Traffic and access;
- Land use and agriculture;
- Air quality;
- Geology, water resources and land quality; and
- Noise and vibration.

5.13.3 Landscape and visual also has the potential to affect other receptors. These are:

- Tourism and recreation;
- Socio-economics; and
- Terrestrial archaeology.

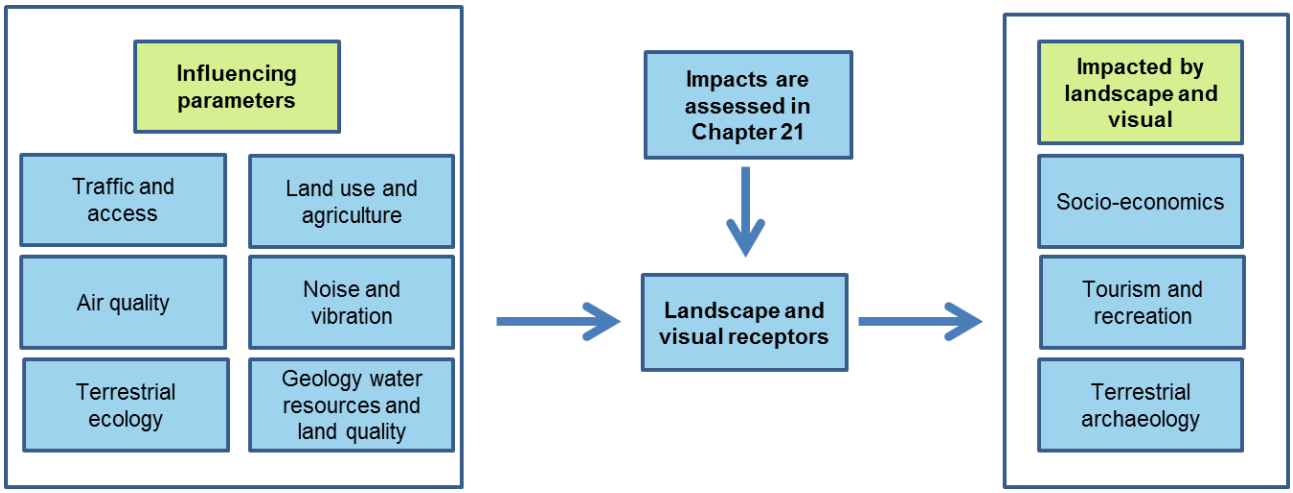

Figure 5.13 Identification of inter-relationships for landscape and visual

Traffic and access

5.13.4 There is potential for an inter-related impact between traffic and access and landscape. The increased traffic associated with the construction has the potential to lead to deterioration in visual amenity of the area combined with other construction activities. These impacts have been assessed in **Chapter 21 Landscape and Visual** as part of the overall consideration of construction activity.

Land use and agriculture

5.13.5 There is potential for an inter-related impact between land use and agriculture and landscape. Changes in landscape resources (disturbance to soils, removal or planting of hedgerows and woodland) could also affect landscape character and residential amenity.

Air quality

5.13.6 There is potential for an inter-related impact between air quality and landscape. A change in air quality can affect the perception and appreciation of landscape character and the residential amenity.

Noise and vibration

5.13.7 There is potential for an inter-related impact between noise and vibration and landscape. A change in noise levels during the construction works has the potential to affect the perception and appreciation of landscape character and the residential amenity.

Terrestrial ecology

5.13.8 There is potential for an inter-related impact between terrestrial ecology and landscape. Changes in landscape resources (disturbance to soils, removal or planting of hedgerows and woodland) could also affect ecological interests.

Geology, water resources and land quality

5.13.9 There is potential for an inter-related impact between geology, water resources and land quality and landscape. Effects on the landscape relate to water quality, flooding and effects on water courses.

Summary

5.13.10 The assessment undertaken for landscape and visual receptors has included a wide range of viewpoints and receptors. The potential for inter-relationships (during all phases of the development) is predominantly associated with the linkages between impacts on the landscape and visual amenity and other human receptors (captured as tourism and recreation). The assessment described in **Chapter 21** provides a fully comprehensive and representative assessment and is inherently inclusive of inter-relationships from the most sensitive of these receptor locations.

5.14 Inter-relationships that impact socio-economics

5.14.1 The parameters that influence socio-economics as well as the receptors that are impacted by it are identified in **Figure 5.14**.

5.14.2 Influencing parameters on socio-economics are:

- Commercial fisheries;
- Tourism and recreation; and
- Land use and agriculture.

5.14.3 No linked chapters have been identified for socio-economics.

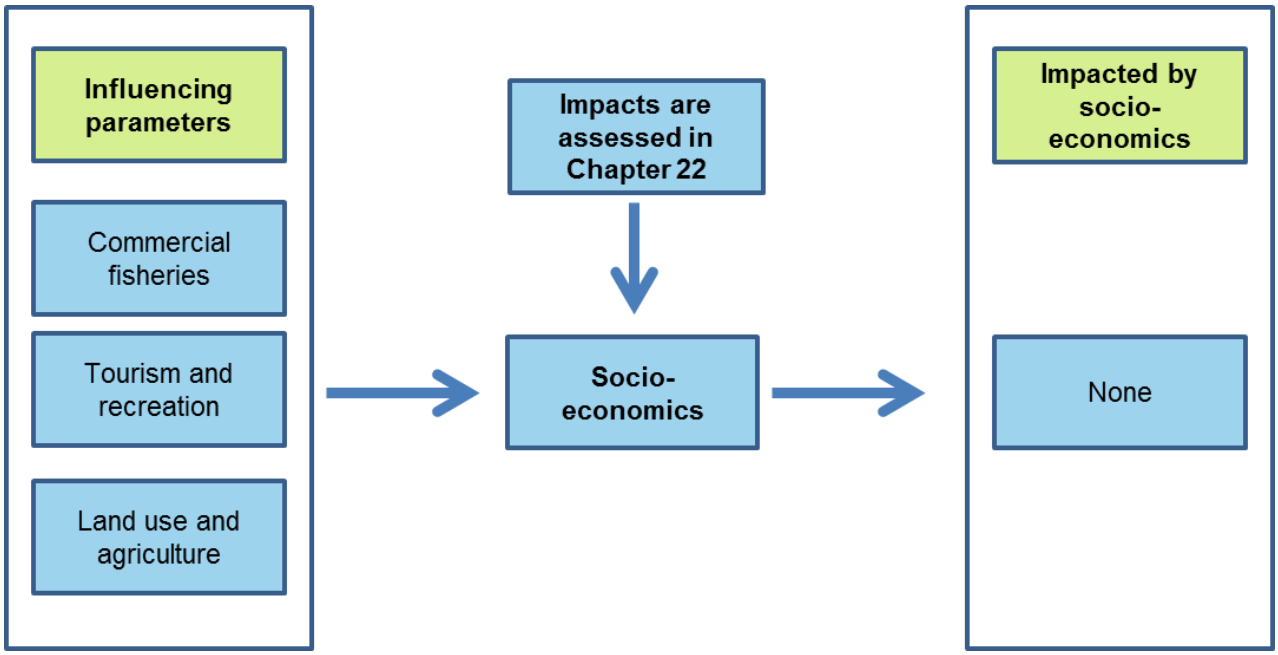

Figure 5.14 Identification of inter-relationships for socio-economics

Commercial fisheries

5.14.4 There is potential for an inter-related impact between commercial fisheries and socio-economics during all phases of the development. **Chapter 15** assesses the residual impacts upon commercial fisheries ranging from no discernible impact to **minor adverse**, as expected from the overall comparatively very low levels of fishing activities that have been recorded within Dogger Bank Teesside A & B and along the Dogger Bank Teesside A & B Export Cable Corridor.

Tourism and recreation

5.14.5 There is potential for an inter-related impact between tourism and recreation and socio-economics. **Chapter 23 Tourism and Recreation** identifies that potential residual impacts to tourist attractions are no higher than **minor adverse** and are limited to the construction period.

Land use and agriculture

5.14.6 There is potential for an inter-related impact between land use and agriculture and socio-economics. **Chapter 26 Land Use and Agriculture** identifies that

potential residual impacts associated with a loss of earnings (secondary impacts) are **negligible**.

Summary

5.14.7 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on socio-economics (associated with loss/reduction in earnings associated with fishing, tourism or agriculture) will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.15 Inter-relationships that impact tourism and recreation

5.15.1 The parameters that influence tourism and recreation as well as the receptors that are impacted by it are identified in **Figure 5.15**.

5.15.2 Influencing parameters on tourism and recreation are:

- Seascape and visual character;
- Landscape and visual;
- Noise and vibration;
- Marine physical processes;
- Air quality;
- Traffic and access; and
- Shipping and navigation.

5.15.3 Tourism and recreation also has the potential to affect other receptors. These are:

- Socio-economics.

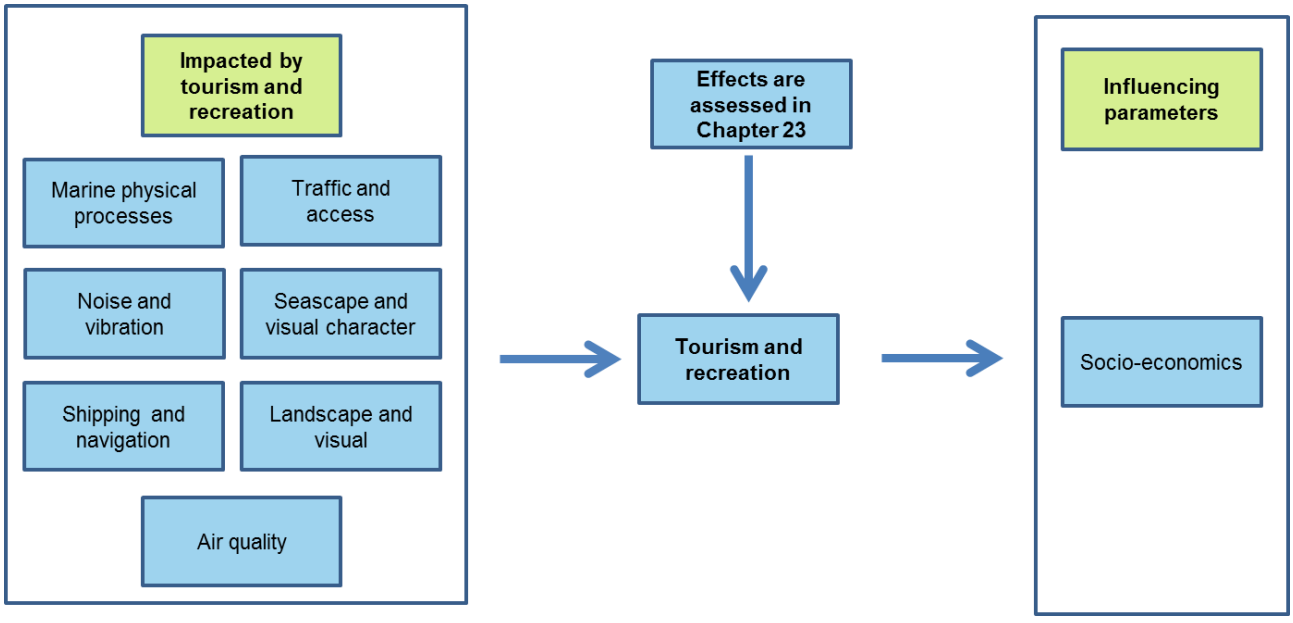

Figure 5.15 Identification of inter-relationships for tourism and recreation

Seascape, Landscape and Visual character

5.15.4 There is potential for an inter-related impact between seascape, landscape and visual character and tourism and recreation during all phases of the development. These impacts are assessed in **Chapter 23** in terms of potential impacts on known tourist features ranging from **no impact** to a **minor adverse impact** during construction and decommissioning. The impacts for the operational phase are assessed as **no impact** or **negligible impact**. No inter-relationships with other parameters have been identified where an accumulation of residual impacts on tourism and recreation (from reduced visual amenity) will give rise to a need for additional mitigation.

Noise and vibration

5.15.5 There is potential for an inter-related impact between noise and vibration and tourism and recreation associated with the potential increased noise impacts resulting during construction. **Chapter 29 Noise and vibration** identifies the impacts as **negligible** to **minor adverse** during construction. No inter-relationships with other parameters have been identified where an accumulation of residual impacts on noise will give rise to a need for additional mitigation.

Air quality

5.15.6 There is potential for an inter-related impact between air quality and tourism and recreation associated with dust emissions, vehicle exhaust emissions and machinery used during construction and decommissioning impacting upon human receptors. **Chapter 30 Air Quality** identifies the impacts of air quality as **negligible** during construction and decommissioning. No inter-relationships with other parameters have been identified where an accumulation of residual impacts on air quality will give rise to a need for additional mitigation.

Traffic and access

5.15.7 There is potential for an inter-related impact between traffic and access and tourism and recreation. **Chapter 23** identifies that increased traffic during construction has the potential to impact known tourism features. **No impact** is anticipated on the high sensitivity feature of North York Moors National Park, whilst **minor adverse** impacts are anticipated on features with medium sensitivity such as museums and other attractions. There is a **negligible** impact on other features of medium sensitivity such as towns and villages, and **no impact** on historic sites.

Marine physical processes

5.15.8 There is potential for an inter-related impact between marine physical processes and tourism and recreation associated with the potential for increased suspended sediment concentrations during construction leading to reduced visibility for diving. **Chapter 23** identifies that potential residual impacts associated with increased sediment disturbance are no higher than **minor adverse**. In addition, it is also considered that the probability of an effect (i.e. reduced visibility) interacting with diving is unlikely, given the generally low levels of activity in the area.

5.15.9 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on tourism and recreation (from reduced visibility for divers) will give rise to a need for additional mitigation.

Shipping and navigation

5.15.10 There is potential for an inter-related impact between shipping and navigation and tourism and recreation in the Dogger Bank Teesside A & B Export Cable Corridor of the development area. This is associated with the increased construction related shipping activity disturbing recreational activities such as angling and watersports. **Chapter 16** states that any disruption is anticipated to be temporary and localised and potential residual impacts are no higher than **minor adverse.** In addition, it is also considered that the probability of an effect (i.e. general disruption) interacting with angling and watersport activity is unlikely, given the generally low levels of activity in the area.

5.15.11 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on tourism and recreation (from general disruption to angling and watersport) will give rise to a need for additional mitigation.

Summary

5.15.12 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on tourism and recreation will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.16 Inter-relationships that impact onshore geology, water resources and land quality

5.16.1 The parameters that influence onshore geology, water resources and land quality as well as the receptors that are impacted by it are identified in **Figure 5.16**.

5.16.2 There are no influencing parameters for onshore geology, water resources and land quality; however, this topic does have the potential to affect the following parameters:

- Terrestrial ecology; and
- Land use and agriculture.

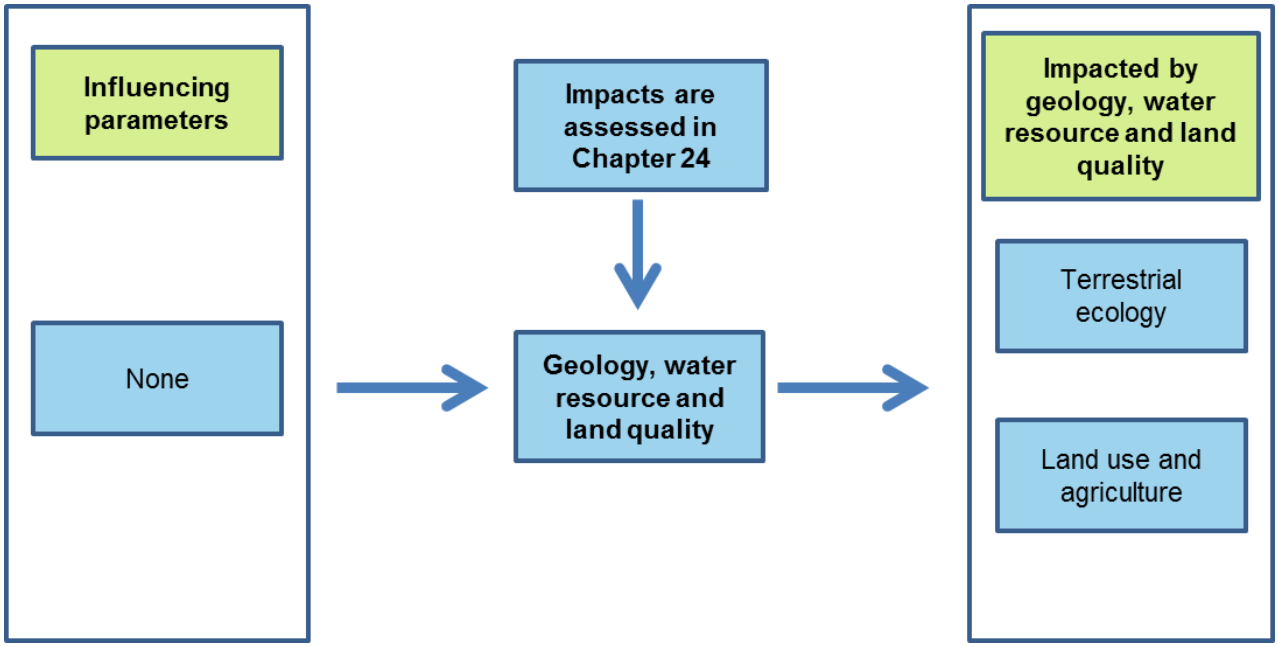

Figure 5.16 Identification of inter-relationships for onshore geology, water resources and land quality

Summary

5.16.3 No inter-relationships have been identified where an accumulation of residual impacts on onshore geology, water resources and land quality, and the relationship between those impacts, give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.17 Inter-relationships that impact terrestrial ecology

5.17.1 The parameters that influence terrestrial ecology as well as the receptors that are impacted by it are identified in **Figure 5.17**.

5.17.2 Influencing parameters on terrestrial ecology are:

- Onshore geology, water resources and land quality;
- Noise and vibration;
- Landscape and visual; and
- Air quality.

5.17.3 Terrestrial ecology has the potential to affect other receptors. These are:

- Landscape and visual.

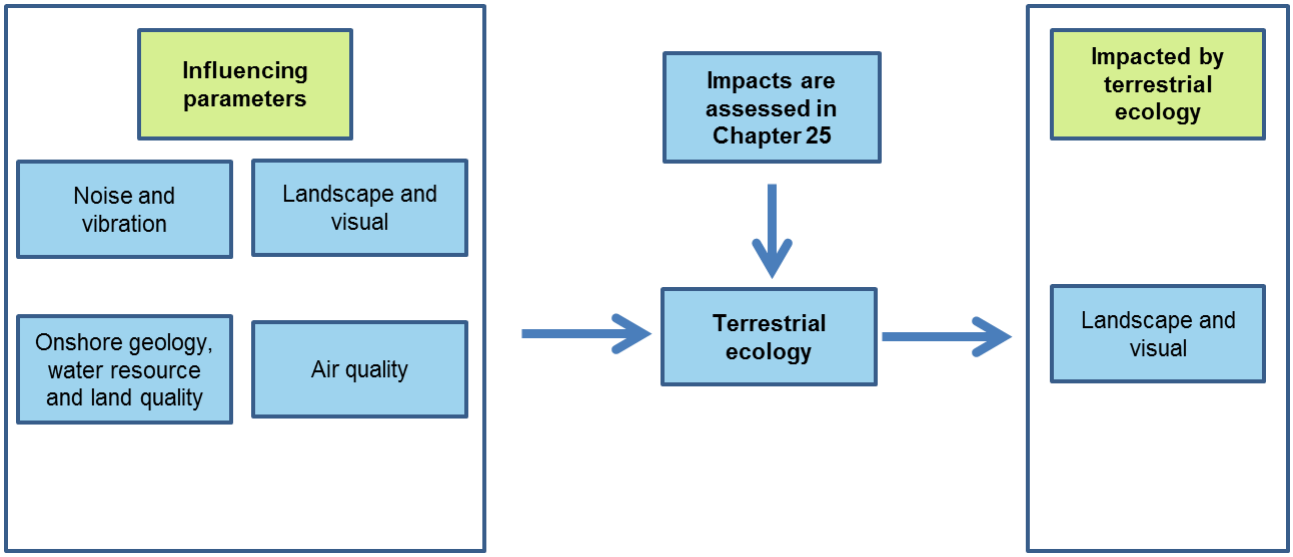

Figure 5.17 Identification of inter-relationships for terrestrial ecology

Noise and vibration and air quality

5.17.4 There is potential for an inter-related impact between terrestrial ecology and noise and air quality. The assessment undertaken for terrestrial ecology considers construction disturbance of which noise and air quality form a component. The assessment described in **Chapter 25 Terrestrial Ecology** identifies **minor adverse** residual impacts for indirect disturbance to wintering birds, breeding birds and bats during construction.

Onshore geology, water resources and land quality

5.17.5 There is potential for an inter-related impact between terrestrial ecology and onshore geology, water resources and land quality. The assessment described in **Chapter 24 Onshore Geology, Water Resources and Land Quality** identifies potential **negligible** impacts to surface water quality and **no deterioration in the status** of the water body identified.

Landscape and visual

5.17.6 There is potential for an inter-related impact between landscape and visual resources and terrestrial ecology. Changes in landscape resources (disturbance to soils, removal or planting of hedgerows and woodland) could also affect ecological interests.

Air quality

5.17.7 There is potential for an inter-related impact between terrestrial ecology and air quality. Changes to air quality and dust emissions during construction phase have the potential to affect ecological interests.

Summary

5.17.8 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on terrestrial ecology will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.18 Inter-relationships that impact land use and agriculture

5.18.1 The parameters that influence land use and agriculture as well as the receptors that are impacted by it are identified in **Figure 5.18**.

5.18.2 Influencing parameters on land use and agriculture are:

- Onshore geology water resource and land quality;
- Terrestrial ecology; and
- Traffic and access.

5.18.3 Land use and agriculture also has the potential to affect other receptors. These are:

- Socio-economics.

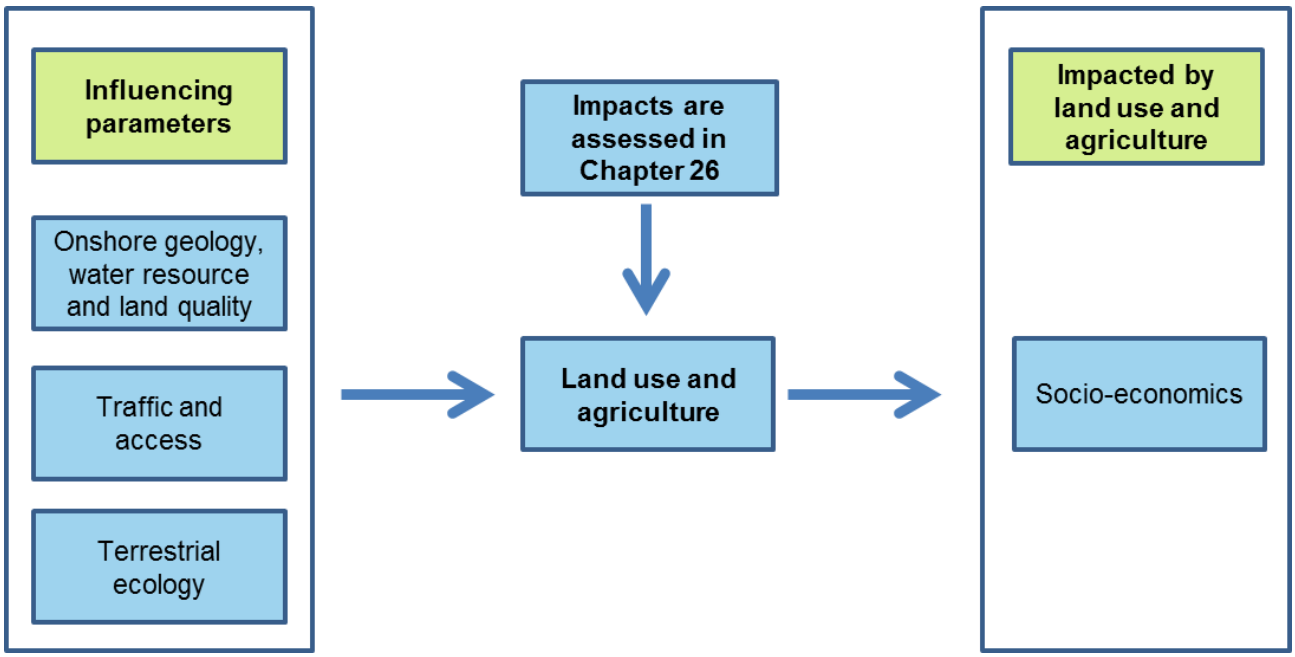

Figure 5.18 Identification of inter-relationships for land use and agriculture

Onshore geology, water resource and land quality

5.18.4 There is potential for an inter-related impact between water quality and land quality, and land use and agriculture during all phases of the development. This impact is assessed in **Chapter 24** in terms of the potential for soil / water contamination. The residual impacts are assessed as **negligible**. No inter-relationships with other parameters have been identified where an accumulation of residual impacts on land use and agriculture will give rise to a need for additional mitigation.

Traffic and access

5.18.5 There is potential for an inter-related impact between traffic and land use and agriculture associated with general disturbance associated with the increased traffic required to access the construction sites, which are predominantly located within arable areas. The residual impacts associated with increased traffic

(general disturbance to agricultural activities) are assessed as **minor adverse** in **Chapter 26**. No inter-relationships with other parameters have been identified where an accumulation of residual impacts on land use and agriculture (general disturbance to agricultural activities) will give rise to a need for additional mitigation.

Terrestrial ecology

5.18.6 There is potential for an inter-related impact between terrestrial ecology and land use and agriculture as changes in ecological interests (removal or planting of hedgerows and woodland and creation of bunding) have the potential to alter the defined land use and agricultural practices.

Summary

5.18.7 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on tourism and recreation will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.19 Inter-relationships that impact terrestrial archaeology

5.19.1 The parameters that influence terrestrial archaeology as well as the receptors that are impacted by it are identified in **Figure 5.19**.

5.19.2 Influencing parameters on terrestrial archaeology are:

- Landscape and visual.

5.19.3 No linked chapters have been identified for terrestrial archaeology.

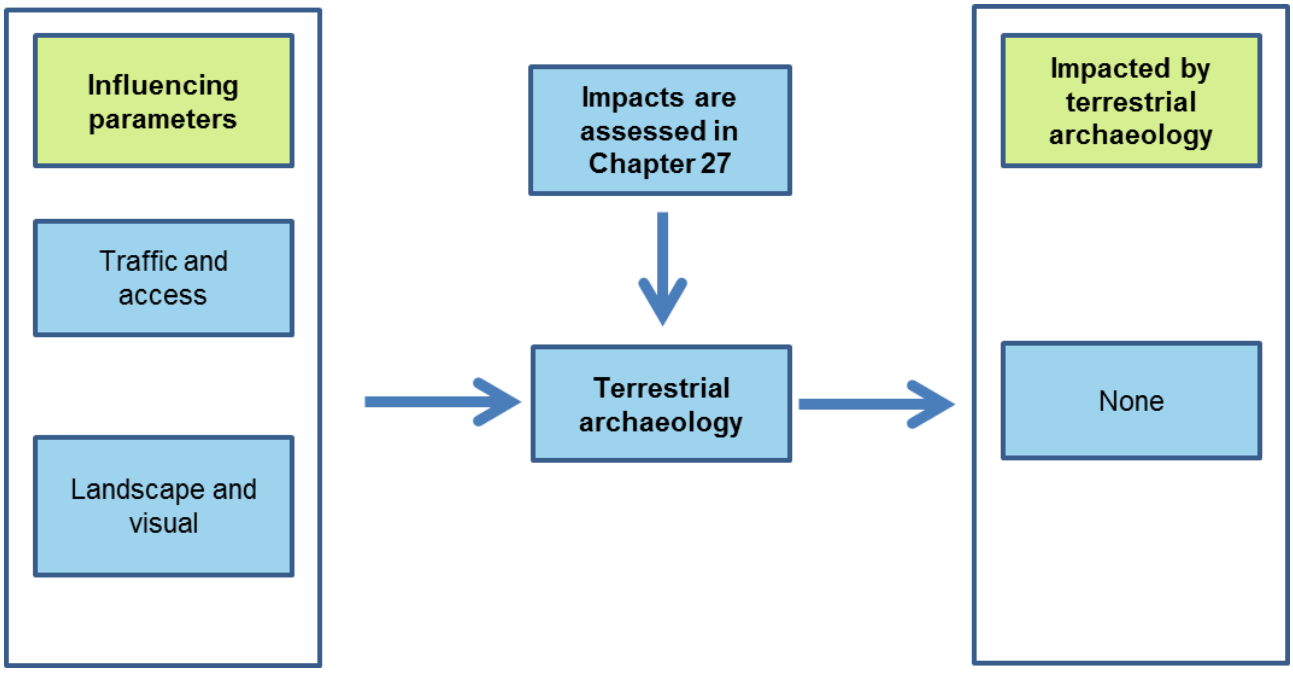

Figure 5.19 Identification of inter-relationships for terrestrial archaeology

Landscape and visual

5.19.4 There is potential for an inter-related impact between landscape and terrestrial archaeology. A change in view has the potential to affect the setting and appreciation of a historic feature (Eston Nab Hill Fort) and historic landscape (Eston Hills).

5.19.5 The assessment described in **Chapter 27 Terrestrial Archaeology** identifies a potential worst case impact of **minor adverse** on the Conservation Areas identified during construction. The potential impact is assessed to be neutral to the Conservation Areas identified during operation.

Summary

5.19.6 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on terrestrial archaeology will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.20 Inter-relationships that impact traffic and access

5.20.1 The parameters that influence traffic and access as well as the receptors that are impacted by it are identified in **Figure 5.20**.

5.20.2 There are no influencing parameters for traffic and access; however, this topic does have the potential to affect the following parameters:

- Noise and vibration;
- Air quality;
- Tourism and recreation;
- Land use and agriculture;
- Landscape and visual; and
- Terrestrial archaeology.

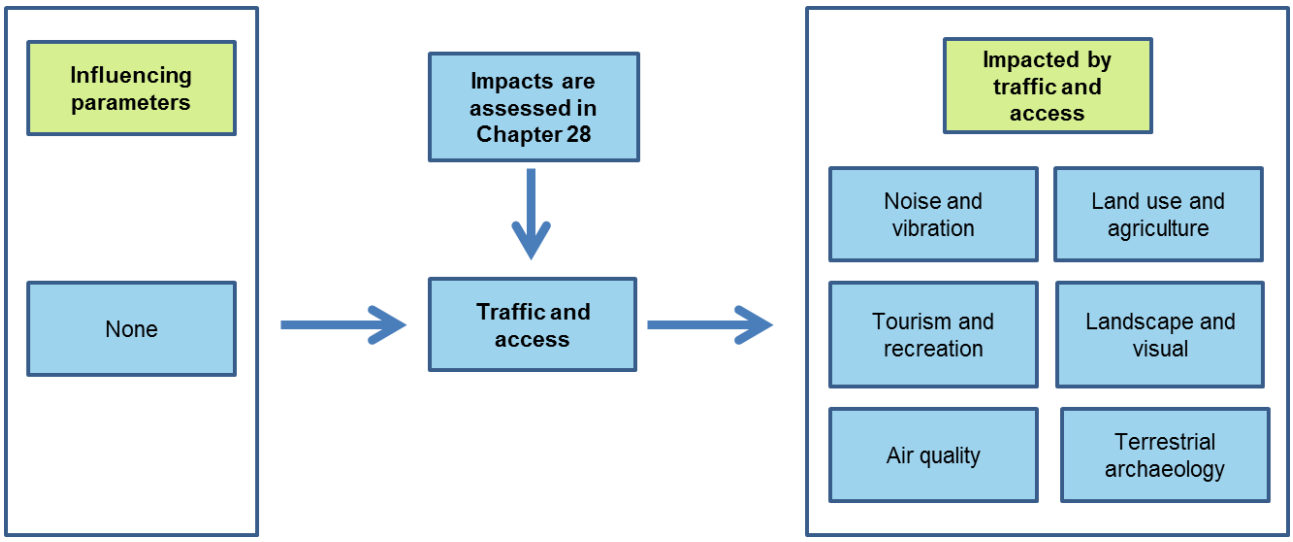

Figure 5.20 Identification of inter-relationships for traffic and access

Summary

5.20.3 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on traffic and access will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.21 Inter-relationships that impact noise and vibration

5.21.1 The parameters that influence noise and vibration as well as the receptors that are impacted by it are identified in **Figure 5.21**.

5.21.2 Influencing parameters on noise and vibration are:

- Traffic and access.

5.21.3 Noise and vibration also has the potential to affect other receptors. These are:

- Human receptors;
- Terrestrial ecology; and
- Marine and coastal ornithology.

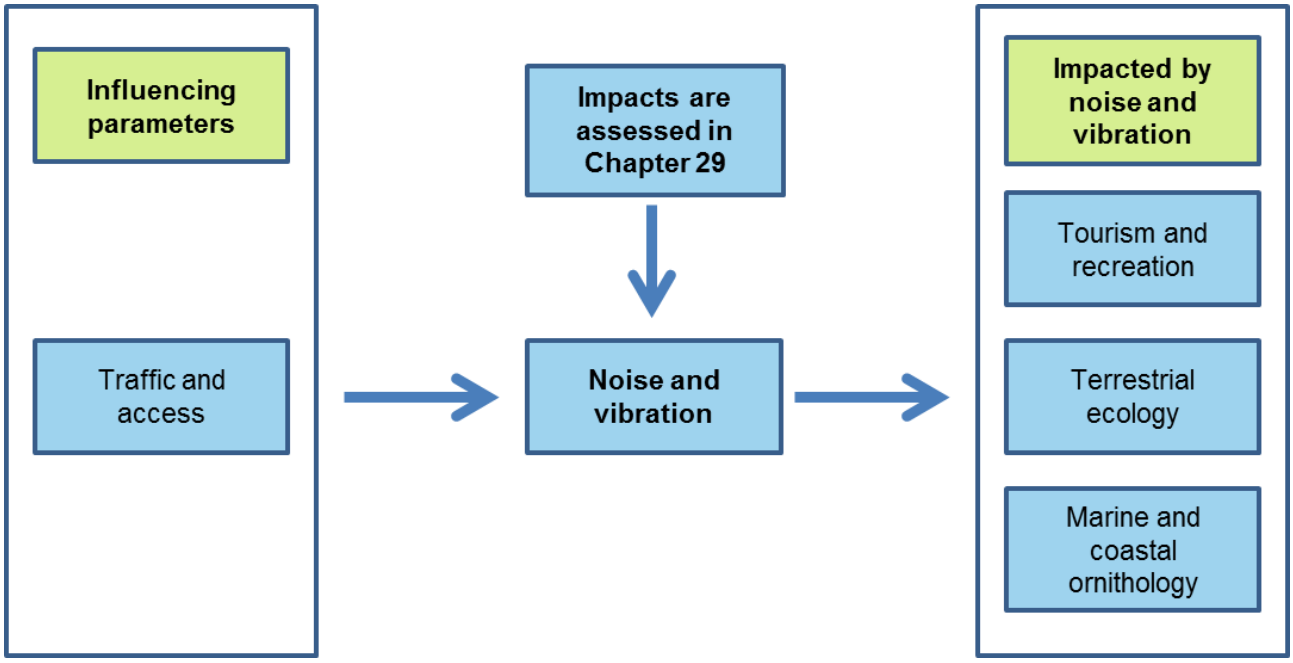

Figure 5.21 Identification of inter-relationships for noise and vibration

Traffic and access

5.21.4 There is potential for an inter-related impact between traffic and noise associated with increased construction traffic. This potential impact is considered in **Chapter 29**. Noise generated by construction-related traffic was assessed considering the increase in traffic flow on surrounding roads used during the construction period. A less than 25% increase in traffic flow along the affected road links is predicted. This equates to a noise increase of less than 1dB, which is regarded as an imperceptible change in noise level according to the criteria and is therefore considered as **negligible**. No inter-relationships

with other parameters have been identified where an accumulation of residual impacts on noise (associated with increased traffic) will give rise to a need for additional mitigation.

Summary

5.21.5 No inter-relationships with other parameters have been identified where an accumulation of residual impacts on noise and vibration will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

5.22 Inter-relationships that impact air quality

5.22.1 The parameters that influence air quality as well as the receptors that are impacted by it are identified in **Figure 5.22**.

5.22.2 Influencing parameters on air quality are:

- Traffic and access.

5.22.3 Air quality also has the potential to affect other receptors. These are:

- Human receptors; and
- Terrestrial ecology.

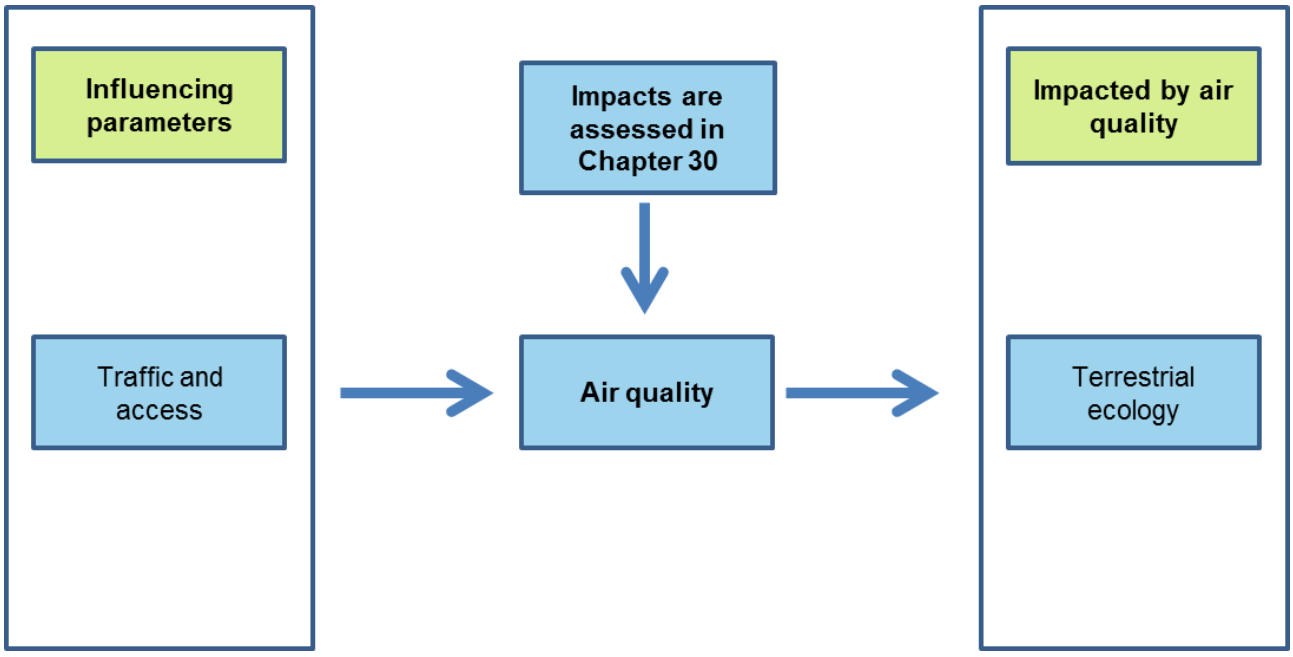

Figure 5.22 Identification of inter-relationships for air quality

Traffic and access

5.22.4 There is potential for an inter-related impact between traffic and air quality associated with increased construction traffic on rural roads. This potential impact is considered in **Chapter 30**. The increased traffic is assessed as having a **negligible** impact with respect to construction phase traffic emissions. No inter-relationships with other parameters have been identified where an

accumulation of residual impacts on air quality (associated with increased traffic) will give rise to a need for additional mitigation.

Summary

5.22.5 No inter-relationships with other parameters were identified where an accumulation of residual impacts on air quality will give rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation.

6 Summary

6.1 Summary

6.1.1 This chapter has identified the potential inter-relationships that could arise from the construction, operation and decommissioning of Dogger Bank Teesside A & B. The assessment has been based on the information presented in **Chapter 9 – Chapter 30** of the ES.

6.1.2 The specific aim of the inter-relationships assessment has been to identify where the accumulation of residual impacts on a single receptor, and the relationship between those impacts, gives rise to additional impacts or impacts of greater significance. Therefore, there is no need for additional mitigation. In doing so, this has ensured that the environmental impacts of the proposal as a whole have been addressed.

6.1.3 A number of inter-relationships have been identified. Where appropriate, the inter-related impact on a given receptor has been found to be assessed in detail in the relevant ES chapter and none of the inter-relationships identified suggest the need for additional mitigation over and above that which is already identified within the assessment chapter.

7 References

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